The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

# STRATEGY RESEARCH PROJECT

STRATEGIC MOBILITY: AN ASSESSMENT

BY

LIEUTENANT COLONEL MARK F. JOHNSTON United States Air Force

### **DISTRIBUTION STATEMENT A:**

Approved for public release.

Distribution is unlimited

19960528 158

**USAWC CLASS OF 1996** 



U.S. ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013-5050

### USAWC STRATEGY RESEARCH PROJECT

STRATEGIC MOBILITY: AN ASSESSMENT

by

Lieutenant Colonel Mark F. Johnston United States Air Force

> Colonel Neal Delisanti Project Adviser

DISTRIBUTION STATEMENT A: Approved for public release. Distribution is unlimited.

U.S. Army War College Carlisle Barracks, Pennsylvania 17013

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

#### **ABSTRACT**

AUTHOR: Mark F. Johnston (LTC), USAF

TITLE: Strategic Mobility: An Assessment

FORMAT: Strategy Research Project

DATE: 15 April 1996 PAGES: 25 CLASSIFICATION: Unclassified

The U.S. National Security Strategy and National Military Strategy are dependent on maintaining a robust capability to project forces through strategic mobility. This study examines the concept of strategic mobility and its links to strategy, the evolution and role of the U.S. Transportation Command, how strategy impacts mobility requirements studies, reviews existing national strategic mobility capabilities, and on-going initiatives. The study concludes with a subjective assessment regarding the adequacy of current programs and initiatives to meet future requirements. The purpose of this paper is to leave the reader with a greater understanding and appreciation for the concept of strategic mobility and how it supports national strategies.

#### STRATEGIC MOBILITY: AN ASSESSMENT

CNN News Nov 1999: What many had hoped would be a joyous celebration of the 10<sup>th</sup> anniversary of the fall of the Berlin Wall and a new peaceful world order, has now become a cautious watch of unfolding world events. Islamic fundamentalism has torn apart 6 of the 15 former republics of the Soviet Union and unleashed wide spread conflict within the Balkans creating mass migration of refugees toward western Europe. In Iraq today, .....

CNN Late Breaking News Dec 1999: The world watches in disbelief as CNN depicts

Iraqi forces retaking Kuwait and advancing into Saudi Arabia, only weeks following the final withdrawal of U.S. forces from the region. In a strike against western interests, Iran issued a demarche against all non-Islamic shipping in the Persian Gulf and threatened to use its arsenal of anti-shipping missiles, mines, and submarines to enforce an exclusion zone. Despite early intelligence warnings of Iraqi troop movements, the U.S. now belatedly begins movement of forces to the theater. In related matters, North Korea announced today......

CNN Late Breaking News Jan 2000: The world watches in horror as South Korea begins full national mobilization in response to intelligence indications that North Korea is preparing to invade and exploit U.S. preoccupation with events in Europe and Southwest Asia. The Koreas stand on the brink of war as the President and his National Security Council deliberate. Insiders tell us that senior U.S. policy makers are secretly discussing nuclear response options because of their inability to project sufficient conventional forces to counter the threat. North Korea has reportedly also fielded nuclear weapons along with an 800 nautical mile capable missile and has threatened to ......

While the previous news accounts are clearly fictitious, they are illustrative in helping one focus on the foundation upon which our current national military strategy and force structure planning are based – the results of the 1992 Mobility Requirements Study, the 1993 Bottoms-Up Review, and the 1995 Mobility Requirements Study Bottom-Up Review Update. These studies serve as the basis upon which our nation has planned, programmed, and budgeted declining defense resources in order to preserve the capability to project sufficient military forces to fight and win in two nearly simultaneous major regional contingencies (MRCs). As our military force structure continues to contract and fewer forward-deployed forces and enroute infrastructures are available, implementing effective national security strategy and national military strategy will become increasingly dependent on retaining a robust strategic mobility capability. Department of Defense (DoD) strategic mobility programs represent the nation's ability to effectively "deploy and sustain military forces worldwide" in the interests of national strategy and objectives.<sup>2</sup> This study will examine 1) the importance of DoD strategic mobility programs within the context of current national security and military strategy, 2) the evolution and role of U.S. Transportation Command (USTRANSCOM) in managing strategic mobility, 3) existing national mobility capabilities, 4) how mobility requirements are defined, 5) ongoing mobility initiatives, and 6) provide an assessment regarding the adequacy of these programs to meet future challenges. The purpose of this paper is to examine a variety of elements shaping strategic mobility today and leave the reader with a greater understanding and appreciation for the concept and how it supports national strategies.

# NATIONAL SECURITY and NATIONAL MILITARY STRATEGY - Setting the Stage

The President's National Security Strategy (NSS) of Engagement and Enlargement acknowledges that as a nation we are entering a post cold-war era marked by uncertainty, evolving threats, great challenges, and new opportunities. The NSS envisions the U.S. engaged in active leadership roles using political, military, and economic components of its power within an international community. Central objectives of this strategy include *enhancing our security*, promoting prosperity at home, and promoting democracy.<sup>3</sup> The strategy objective of enhancing our security contains critical elements which demand a robust force projection capability and establish such requirements as the ability to 1) deter and defeat aggressors in two nearly simultaneous MRCs, 2) sustain a credible overseas presence through forward deployed forces and rapid reinforcement, and 3) participate in multi-national conflict resolution efforts including a wide ranging assortment of missions other than war.<sup>4</sup> Even the strategy components of promoting prosperity at home and promoting democracy acknowledge the contributions and roles of a strong military (founded on credible strategic mobility) and its ability to influence international alliances, foreign markets, global economic growth, and developing democracies.

In response to President Clinton's NSS the Chairman of the Joint Chief's of Staff, General Shalikashvili prepared his National Military Strategy (NMS) of Flexible and Selective Engagement. The NMS incorporates the three strategy components of *peacetime engagement*, deterrence and conflict prevention, and fighting and winning our nations' wars within the strategic concepts of overseas presence and power projection. While the strategic concept of power projection is intended to complement overseas presence, power projection is the unpinning that enables all other strategy components of the NMS and strategic mobility provides the means

by which power projection becomes a meaningful element of national and military strategy.<sup>7</sup> As General Shalikashvili noted, "If we do not build a transportation system that can meet our needs tomorrow then it doesn't matter much what kind of force we have because we won't be able to get it there."<sup>8</sup> It is precisely this responsibility which USTRANSCOM is charged with executing through its mission "to provide air, land, and sea transportation for the Department of Defense in time of peace and time of war."<sup>9</sup>

#### USTRANSCOM'S EVOLUTION AND ROLE - Lessons Learned Over Time

The Hoover Commission Report of 1949 appears to be the first official record in which the DoD considered unifying transportation assets. <sup>10</sup> Unfortunately, strategic mobility was not considered a significant issue during the 1950s as the U.S. developed a nuclear strategy of massive retaliation, placed little emphasis on conventional conflict nor the associated planning requirements to support mobility, and held the view that major conflicts would be dealt with by nuclear response options. <sup>11</sup> Even the Vietnam War failed to stress the transportation system sufficiently to force any substantial reorganizations, although studies conducted during the 1960s recommended a centralized approach to transportation functions. <sup>12</sup> This perspective continued until 1978 when the JCS initiated Exercise NIFTY NUGGET.

NIFTY NUGGET was a government-wide command post mobilization and deployment exercise designed to stress mobility plans supporting a rapid reinforcement of NATO forces. <sup>13</sup>

The exercise was a failure and highlighted significant shortfalls in both airlift and sealift capabilities, breakdowns in communications between the various transportation agencies, and improper coordination of military plans. <sup>14</sup> Recommendations emerging from the exercise included

proposals to have the service's transportation agencies report directly to the JCS and that the JCS establish a single manager for deployment execution. <sup>15</sup> The JCS implemented the second recommendation and created the Joint Deployment Agency (JDA) in 1979 in an attempt to effectively tie together the transportation resources possessed by the services, the war plans these resources supported, and ensure commonality among a variety of computer system and databases needed to support multi-mode transportation requirements. Unfortunately, the JDA was not given the authority to exercise command over the service component transportation assets and failed to ensure commonality of database management systems. Deficiencies in data automation were noted in General Accounting Office reports <sup>16</sup> and even the JCS showed its lack of confidence in the JDA when it did not bring the agency into play during Operation URGENT FURY. <sup>17</sup> Following URGENT FURY, Congress too noted deficiencies in the JDA and a presidential blue ribbon panel, known as the Packard Commission, convened in 1986 to assess defense management and recommended that the Secretary of Defense create a single, unified command responsible for integrating air, land, and sea transportation assets. <sup>18</sup>

USTRANSCOM was established in October 1987 and became fully operational in October 1988 with the mission "to provide common-user airlift, sealift, terminal services and U.S. commercial air and land transportation to deploy, employ, and sustain U.S. forces on a global basis" including responsibility "for the transportation aspects of worldwide mobility planning, including refinement, administration, and operation of the Joint Deployment System." This initial charter to manage defense transportation in wartime was expanded in February 1992 by the Secretary of Defense to include combatant command of USTRANSCOM components in peacetime as well, and resulted in the elimination of the single manager charters of the service secretaries. USTRANSCOM's mission was now more succinctly stated as "to provide air,"

land, and sea transportation for the Department of Defense, both in time of peace and time of war."<sup>21</sup> The Goldwater-Nichols legislation of 1986 and the DoD Directive 5158.4 of 1993 now provide the basis upon which to build a fully integrated, streamlined, and flexible defense transportation system focused on customer requirements. The Commander in Chief (CINC) USTRANSCOM's Defense Transportation System (DTS) Plan 2010 includes seven specific objectives which call for integration of global information systems to improve traffic management processes, integration of financial management systems to promote better business practices, and a single integrated procurement system for USTRANSCOM.<sup>22</sup> With the advent of DTS 2010, and its requirement for the components to build supporting plans (Strategic Roadmaps and Master Plans) which link their goals and objectives to those of the DTS 2010, we now begin to see the first real signs of an emerging integrated transportation system.

As the single manager of the DoD's transportation system, USTRANSCOM now exercises combatant command authority over the Army's Military Traffic Management Command (MTMC), the Navy's Military Sealift Command (MSC), and the Air Force's Air Mobility Command (AMC). While these commands (and their predecessors) have historically focused on their own unique mode of transportation (land, sea, air), USTRANSCOM component commands now focus on providing their core competencies and capabilities in support of an integrated DTS. It is USTRANSCOM which provides the synergistic integration of surface transportation, sealift, and airlift through command and control initiatives such as the Joint Intelligence Center Transportation, Global Transportation Network, and the joint staff sponsored Global Command and Control System. It is these types of integrating efforts which build a DTS providing strategic mobility in support of national strategies.

## **EXISTING NATIONAL MOBILITY CAPABILITIES - A Brief Review**

MTMC serves as the land component command for USTRANSCOM and is responsible for providing "traffic management, CONUS-based surface transportation, strategic seaports or common-user ocean terminals, intermodal moves, and transportation engineering." Its core competencies include worldwide port operations, global traffic management, deployment engineering, and integrated transportation systems. It is the coalescence of these core competencies which brings a focus to the NMS strategic concept of power projection and directly supports force sustainment. While MTMC is the smallest of the three component commands, it actively manages 22,500 shipments and 24 ports in 13 different countries on a typical day. Not only does MTMC manage critical "fort to port" activities, it is also actively involved in such programs such as the Defense Freight Railway Interchange Fleet (managing up to 1,000 special use railcars) and the development of multi-modal (intermodal) transportation program analysis.

MSC serves as the sealift component command for USTRANSCOM and is responsible for three primary mission areas including strategic sealift, direct U.S. Navy fleet support, and special mission support.<sup>27</sup> For purposes of strategic mobility, the strategic sealift mission area of MSC represents those forces which best serve the NMS strategic concept of power projection through its fleet of cargo ships, tankers, freighters, Maritime Prepositioned Ships (MPS), prepositioning (PREPO) ships dedicated to service and defense logistics requirements, Fast Sealift Ships (FSS), and the Ready Reserve Force (RRF) ships maintained by the Maritime Administration (MARAD) in 4, 5, 10, 20, or 30 day readiness conditions.<sup>28</sup> Additionally, MSC manages the DoD Sealift Readiness Program (SRP) which provides for sealift augmentation under conditions less than full mobilization through preestablished contracts with commercial shippers. Within the strategic

sealift mission area of MSC's missions, three operational strategies are used to support strategic mobility and include prepositioning, surge, and sustainment sealift.<sup>29</sup>

Afloat prepositioning provides significant strategic advantage over land prepositioned assets because of its inherent ability to more easily relocate equipment to potential hotspots. Included in this category are dedicated Marine MPS squadrons, Army Brigade Afloat Force, and other service or DoD agency assets. Surge capability includes FSS and RRF ships involving the transportation of heavy outsized equipment required during the initial stages of a contingency. Sustainment sealift ensures supplies reach combat forces to sustain their operations and is supported through a combination of U.S. carriers, foreign flag ships, and RRF assets. In addition to the MSC afloat prepositioned assets, the Army maintains nine brigade sized equipment sets in potential flash point areas to include four in Europe, one in Italy, and two in Southwest Asia, and one in Korea.<sup>30</sup>

Overall, the MSC controls a diverse range of sealift assets to support strategic mobility including over 70 strategic sealift ships (organic/chartered including 34 afloat prepo) and over 75 ships in inactive MARAD administered RRF status.<sup>31</sup> Its ability to charter ships from the private sector (U.S. and allied flag carriers) provides a significant wartime surge capability while in peacetime MSC handles over 95% of DoD cargo through U.S. flag ships.<sup>32</sup>

AMC serves as the airlift component command for USTRANSCOM and is responsible for providing global airlift and aerial refueling capability for U.S. forces.<sup>33</sup> While the land, sea, and air components of strategic mobility all support the NMS across a wide spectrum of potential conflicts, air mobility forces are uniquely suited to influence emerging crises, particularly in the early stages before land or sea assets can respond. Airlift aircraft provide speed, range, and flexibility (particularly when supported through aerial refueling operations) to support the NMS

strategic concept of power projection, as well as, many military and civil operations other than war, most notably humanitarian and peacekeeping operations.<sup>34</sup> AMC has over 1000 assigned aircraft supporting airlift and air refueling mission areas including operational tasks such as cargo and passenger movements, operational support airlift (OSA), aerial delivery, aeromedical evacuation, special operations, and supports the Single Integrated Operational Plan (SIOP) for our nation's nuclear deterrence. Of these 1000 aircraft approximately 400 C-5s, C-17s, C-141s, and KC-10s directly contribute toward organic airlift capability.<sup>35</sup>

Just as MTMC and MSC are heavily dependent upon commercial industry support and reserve forces augmentation<sup>36</sup> so too is AMC. Of its current airlift capacity of 49 million ton miles per day (MTM/D),<sup>37</sup> a full 18 MTM/D of its surge capacity comes from commercial industry support through the Civil Reserve Air Fleet (CRAF) program, while approximately 14 MTM/D is provided by active duty forces and 17 MTM/D through reserve component forces.<sup>38</sup> The CRAF is a critical volunteer program which provides the DoD with 93 percent of its long haul passenger capacity as well as 32 percent of its long range cargo capability.<sup>39</sup> In return for commercial air carrier CRAF participation during a contingency, the carriers are awarded a significant amount of DoD peacetime business.

MTMC, MSC, and AMC each bring with them core modal mobility capabilities and supporting plans to facilitate integration within an overarching defense transportation structure. It is USTRANSCOM's responsibility to provide effective management oversight to ensure a fully integrated system capable of meeting clearly identified strategic mobility requirements. Initiatives such as the joint staff sponsored Global Command and Control System (replacement for the Worldwide Military Command and Control System including significant enhancements to the Joint Operation Planning and Execution System), Joint Intelligence Center Transportation, Global

Transportation Network, intransit visibility, and total asset visibility programs will provide the glue which binds together the core component command capabilities into a coherent DTS.

### **DEFINING STRATEGIC MOBILITY REQUIREMENTS - Shaped by Strategy**

Just as the NSS and NMS evolve in response to changing world environments, so too have mobility requirements studies. The study of mobility requirements is a complex process of analysis and is greatly influenced by assumptions made in modeling the movement of forces, threats, acceptable levels of risk, host nation support, enroute infrastructure, attrition, fiscal limits, organic capabilities, surge capabilities, and many more. The focus of mobility studies, however, must remain on the strategy that the nation seeks to support, regardless of whether it is a specific threat based focus or a regional capability based focus.

One of the most comprehensive threat based mobility studies prior to the collapse of the Soviet Union was the Congressionally Mandated Mobility Study (CMMS) of 1981.<sup>40</sup> Its focus was on Cold War scenarios involving hypothetical Soviet invasions into NATO, Saudi Arabia, Iran, as well as a sequential invasion of Saudi Arabia followed by NATO. The study highlighted significant mobility shortfalls and concluded by making the following recommendations: 1) fiscally constrained airlift capability of 66 MTM/D, 2) 130,000 tons of prepositioned munitions and resupply in Southwest Asia, 3) a MPS for a third brigade sized MAGTF, 3) 20 MTM/D of additional outsized/oversized airlift capability, 4) dedicated roll-on/roll-off shipping with capacity for 100K tons, and 5) provisioning of adequate support to the Army's D-Day force in Europe through some combination of prepositioning, host-nation support, or other mobility means to be developed after further negotiations with European allies. 41,42

The Mobility Requirements Study (MRS) of 1992 looked at five different regional contingencies, as well as, a scenario in which two regional contingencies began sequentially. The MRS study differed significantly from the CMMS however in that it acknowledged that the world was now entering a new post-Cold War era and was committed to the reality of a smaller U.S. forward presence. The study also recognized the shift in focus from a long standing strategy of Communist containment to one of a regional orientation and was influenced by the president's NSS which stated that "the ability to project our power will underpin our strategy more than ever."43 The study noted that the DESERT SHIELD deployments had been conducted at considerable risk to deploying forces due to the inability of mobility forces to project power more quickly and recommended, as a basis for its analysis and recommendations, that no more than moderate risk be used to pursue future U.S. objectives. Specifically, the MRS recommended the following initiatives: 1) additional sealift capability equal to 20 large, medium speed roll-on/rolloff ships (LMSR) of 380,000 ft<sup>2</sup> total capacity, as well as, 2 leased container ships for prepositioning, 2) deploy an afloat pre-positioned Army combat and combat support package of approximately 2 million ft<sup>2</sup>, 3) add 3 million ft<sup>2</sup> of surge sealift capability for rapid deployment of heavy Army divisions using 11 LMSRs, 4) expand RRF from 96 ships to 142 ships (of which 104 will be dry-cargo) with expansion and modernization such that the fleet would be adequate to deploy in 8 weeks, 5) consider through the acquisition process new concepts to acquire sealift capacity at lower cost, 6) continue the C-17 program, and 7) improve specific components of the U.S. transportation system to include 233 additional heavy-lift railcars, improved military use of containerization, a containerized west coast ammunition loading facility, additional berthing, and other port readiness issues.44

The most recent study of strategic mobility requirements was the Mobility Requirements Study Bottom-Up Review Update (MRSBURU) of 1995. This relook of strategic mobility was necessary because of changes made to U.S. defense strategy now requiring support for two near simultaneous MRCs, as well as, changes to projected force structure, modernization efforts, and infrastructure as a result of the Bottom-Up Review of 1993. <sup>45</sup> The MRSBURU continued to focus on maintaining regional response capabilities and analyzed four separate scenarios: a single MRC in the east, a single MRC in the west, and two near-simultaneous MRCs (first an east MRC followed by west MRC, and also a west MRC followed by an east MRC). As with the MRS, moderate risk was determined as the basis for analysis through all three warfighting phases (halting action to stop enemy attack, buildup phase, and counterattack phase with decisive force). The study confirmed the MRS Integrated Mobility Plan's CONUS infrastructure improvement recommendations, <sup>46</sup> its sealift recommendations, <sup>47</sup> and revised the airlift requirement between 49.4 MTM/D to 51.8 MTM/D. <sup>48</sup> Additionally, the study noted deficiencies in CRAF aeromedical airlift. <sup>49</sup>

### **ONGOING MOBILITY INITIATIVES - Efforts Toward Meeting The Requirements**

It is clearly appropriate that mobility requirements studies be based upon national security strategies. It is equally important that the "lessons learned" from these studies be translated into "lessons implemented" such that there is credible substance to such strategic concepts as power projection within the NMS. All elements of strategic mobility to include land, sea, prepositioning, and airlift must be fully integrated to effectively serve the nation's needs.

The MRS recommended the following to improve land component assets of the U.S. transportation system: 233 additional heavy-lift railcars, improved military use of containerization. a containerized west coast ammunition loading facility, additional berthing, and other port readiness issues.<sup>50</sup> Based upon the MRS and the Army's Strategic Mobility Program, 2.027 railcars are needed in support of Army and Marine requirements including 397 prepositioned heavy lift railcars to support M-1 tank movements. While the prepositioned heavy lift assets are currently available, acquisition of over 1,000 additional railcars through fiscal year 2001 is currently in the Army's Strategic Mobility Program and will bring railcar inventories and capacity to nearly 2000.<sup>51</sup> Containerization is also becoming an increasingly important element in surface transportation, as well as, intermodal movement. To this end USTRANSCOM has initiated a Joint Container Exercise Program to stress infrastructure responsiveness and the U.S. Army has committed over \$90M to support the acquisition of an additional 16,000 containers by FY2001.<sup>52</sup> Containerization is also playing a role in ammunition processing. As recommended by the MRS, enhancement projects are currently underway at two west coast ports which will increase throughput capacity to 720 twenty-foot containers per day by fiscal year 1999.<sup>53</sup> Port readiness issues are also being addressed by USTRANSCOM through such joint efforts as USTRANSCOM/U.S. Atlantic Command strategic seaport joint operating force packages designed to open, operate, and close common-user ports and USTRANSCOM doctrine development for a single seaport manager concept to standardize management of strategic seaport operations for supported warfighting commanders.<sup>54</sup>

The MRSBURU study essentially confirmed the MRS Integrated Mobility Plan sealift recommendations of 10 million square feet capacity. <sup>55</sup> While current capacity is approximately 6.5 million square feet, the acquisition of 19 LMSRs (11 for surge sealift and 8 for Army preposition

afloat sets through a process of ship conversion and new construction), increases in the number of RO/ROs in the RRF from 17 to 36, and the introduction of two leased container ships in 1995 (also for Army preposition afloat requirements) result in steady capacity growth until fiscal year 2001 when the last LMSR is delivered to reach 10 million square feet surge capacity. <sup>56</sup> Afloat prepositioned capability is also increasing toward the MRS goal of 4.5 million square feet including 2 million square feet to support movement of an Army heavy brigade afloat. To support the growth in the current afloat prepositioned capability of approximately 3.5 million square feet (1995), MSC will meet these requirements through a combination of interim lift RRF ships. conversions of LMSRs and ultimately with acquisition of new LMSRs by fiscal year 2001.<sup>57</sup> One of the more interesting initiatives being studied is a replacement for the SRP with a CRAF-like program called Voluntary Intermodal Sealift Agreement (VISA). VISA is a USTRANSCOM, MARAD, and maritime industry study which addresses deficiencies of the SRP and proposes a three stage activation where carriers would commit shipping space and complete intermodal, terminal, and management services to allow a seamless transition to a wartime surge requirement. As with CRAF, participants in VISA would be awarded peacetime DoD business commensurate with their commitment of assets and services. Activation of VISA stages I and II, under CINCTRANS authority and SECDEF approval, would satisfy all known DoD sealift requirements.58

The MRSBURU set a target for airlift capacity between 49.4 and 51.8 MTM/D capability. The current capability is approximately 49 MTM/D with a full 18 MTM/D of this surge capacity coming from commercial industry support through the CRAF program, while approximately 14 MTM/D is provided by active duty forces and 17 MTM/D through reserve component forces. 59 The 49 MTM/D capability is derived from a fleet of C-5, C-141, KC-10, C-17, and CRAF

aircraft. Perhaps the single most significant modernization issue for the airlift community was the viability of the C-17 aircraft as a replacement for the C-141 as it reaches the end of its service life. The positive Milestone IIIB Defense Acquisition Board decision in November 1995 to purchase an additional 80 C-17s (total buy set at 120) now cleared the way for attainment of the MRSBURU goal.60 While other aircraft were considered to meet the goal of 49.4 MTM/D (including additional C-5s and Boeing 747), the C-17 demonstrated significant advantages over other options despite its higher cost, particularly in militarily significant capabilities such as outsized equipment, ground handling, cycle time, and the amount of cargo it could deliver through a particular aerial port (throughput tons/day).<sup>61</sup> The purchase of 120 C-17s will allow an orderly retirement of the C-141 by 2004 and development of options for C-5A model replacements beginning in 2006 when they too reach the end of their service life. The second highest air mobility acquisition priority is a new 60,000 pound capable aircraft loader designed to replace logistically unsustainable 40,000 pound capable loaders and other wide-body aircraft loaders currently in the inventory. Adequate material handling equipment is essential for efficient operations and generating expected cargo throughput (MTM/D). The current fleet of loaders can meet only about 77 percent of total loading requirements while the future plan to purchase 318 60,000 pound loaders will meet all forecast requirements.<sup>62</sup> While passenger and cargo contributions of the CRAF carriers is adequate to meet future requirements, there is a significant shortage of aeromedical evacuation (AE) capability noted in the MRSBURU. The JCS CRAF III AE requirement is 44 Boeing 767ER aircraft yet only 19 Boeing 767ERs are currently enrolled in the program. AMC is addressing this shortfall by studying whether a suitable AE capability can be derived from a DC-10 type aircraft which carriers are more likely to commit than their highly profitable Boeing 767s.63

Tying together the core capabilities of MTMC, MSC, and AMC are command and control initiatives that seek to provide efficiency, structure, and integration toward attaining a defense transportation system. Key efforts in this regard include support for the JCS sponsored replacement of the Worldwide Military Command and Control System with the Global Command and Control System and significant enhancements to the Joint Operation Planning and Execution System. Additionally, the Global Transportation Network (GTN) ties together transportation data from MTMC, MSC, AMC, and other DoD agencies to provide users of the transportation system with intransit visibility of personnel, equipment, and cargo. GTN will provide commanders immediate information on the status of their resources in transit to them, as well as, provide USTRANSCOM analysis capability to assess transportation options. Efforts such as the Joint Container Exercise Program and Joint Logistics Over the Shore exercises also help to improve the effectiveness of core lift programs.

# AN ASSESSMENT - Are We On The Right Track For The Future?

The MRSBURU asked the following question, "What strategic lift is required to support national military strategy in the year 2001, and what is the required mix of airlift, sealift, and prepositioned equipment given fiscal realities?" Given the forces currently provided by MTMC, MSC, and AMC coupled with ongoing initiatives to improve infrastructure, command and control, and lift assets, this strategic mobility assessment concludes that the recommendations contained in the MRSBURU are "on track" and that we will acquire the correct strategic lift capacity and mix by approximately FY2001.

While concern over strategic lift has been voiced by many in senior leadership positions, including theater CINCs and service chiefs, <sup>67</sup> support for strategic lift programs and the concept of power projection remains strong and was recently reaffirmed by the Secretary of Defense. Secretary Perry's comments on the FY97 DoD Budget emphasized the importance of strategic mobility as U.S. forces become more concentrated in the continental U.S. and our national strategies must rely on fewer forward deployed forces. <sup>68</sup> Keeping funding profiles "on track" is essential to supporting a two MRC strategy and meeting requirements projections.

Fiscal reality and the assumptions used in analysis greatly influence our strategies, force structure, and the strategic mobility assets required to employ them. This was noted in the Government Accounting Office's (GAO) challenge to some of the assumptions of the DoD's Bottom-Up Review. The GAO raised questions regarding the adequacy of key assumptions on the availability of combat forces, support capabilities, movement of forces from one requirement to another, plus many other issues. Additionally, the GAO noted that even some of the warfighting CINCs had differences of option on assumptions and the likely sequence of events for an evolving two MRC scenario. Rand Corporation, too, noted shortfalls in actual average airlift cargo loads per mission during the Persian Gulf War when compared with planning factors used to assess overall capability. Even CINC USTRANSCOM in his posture statement before the 104th Congress clearly acknowledged that assumptions used to model the two MRC strategy greatly influenced the predicted outcomes.

Ultimately it boils down to judgment and the confidence we have in the assumptions made to predict requirements. It is not the purpose of this mobility assessment to question whether we have correctly chosen the NSS and NMS upon which we build our nation's defense, nor whether the assumptions made to model warfighting requirements or the strategic mobility assets required

to project these combat forces is 100 percent correct -- there is simply too much uncertainty and the dynamics of world events are too complicated to predict with perfect accuracy. What is certain, however, is that our nation has made a clear commitment to a strategy heavily dependent on the ability to project power on a global basis. Strategic mobility brings substance to power projection, it serves as a deterrent to potential adversaries, and enables a multitude of other operations including humanitarian relief and peacekeeping operations. Credible combat forces and the means to project them is the essence of strategic mobility and global power. Strategic mobility is one of the unique elements of U.S. military power that distinguishes us from any other nation and enables us to project power and influence throughout the world in the support of national interests.

As our nation downsizes its military forces and focuses on regional response capabilities, the importance of strategic mobility will continue to grow. Currently, we are on the correct course to match strategic mobility capability with our strategies. It is our collective responsibility to ensure that we maintain credible means to project these limited forces in support of future national strategies.

"Victory is the beautiful, bright colored flower. Transport is the stem without which it could never have blossomed" - Winston S. Churchill.<sup>72</sup>

#### **ENDNOTES**

- <sup>1</sup> Joint Chiefs of Staff, <u>Mobility Requirements Study Bottom-Up Review Update</u>, Washington: U.S. Department of Defense, 28 March 1995, ES-1.
- <sup>2</sup> Joint Chiefs of Staff, <u>DoD Dictionary of Military Publications and Associated Terms</u>, Joint Publication 1-02, Washington: U.S. Department of Defense, 23 March 1994, 364.
- <sup>3</sup> White House, <u>A National Security Strategy of Engagement and Enlargement</u>, Washington: The White House, February 1995, 7.

<sup>4</sup> Ibid., 8-18.

<sup>5</sup> Joint Chiefs of Staff, <u>National Military Strategy of the United States Of America</u>, Washington: U.S. Government Printing Office, 1995, i.

5 Ibid., 7.

Department of the Army, Mobilization, Deployment, Redeployment, Demobilization, Army Field Manual 100-17, (Washington: U.S. Department of the Army, 28 October 1992), 4-1.

<sup>8</sup> United States Transportation Command, <u>USTRANSCOM - A Vision For The Future</u>, USTRANSCOM Pamphlet 35-1(Scott AFB, II: Public Affairs Office, March 1995), insert.

<sup>9</sup> Department Of Defense, <u>United States Transportation Command</u>, DoD Directive 5158.4, (Washington: U.S. Department of Defense, 8 January 1993), 2.

<sup>10</sup> Cassidy, Duane H., "One-stop Mobility Shopping", <u>Defense 87</u>, November - December 1987, 54.

<sup>11</sup> Russell, James A. "Deployment: Will TRANSCOM Make A Difference", <u>Military Logistics Forum</u>, June 1987, 42.

12 "Transportation Unified - The Arrival of TRANSCOM", Airlift, Fall 1987, 1.

<sup>13</sup> Cassidy, 54.

<sup>14</sup> Canan, James W., "Can TRANSCOM Deliver?", <u>Air Force Magazine</u>, October 1987, 45.

15 Cassidy, 54.

<sup>16</sup> Russell, 44.

<sup>17</sup> Canan, 45.

<sup>18</sup> Ibid., 46.

<sup>19</sup> Cassidy, 55.

<sup>20</sup> United States Transportation Command, <u>USTRANSCOM Fact File</u>, (Scott AFB, II: Public Affairs Office, January 1995), 3.

<sup>21</sup> DoD Directive 5158.4, 2.

<sup>22</sup> Rutherford, Robert L. General, <u>United States Transportation Command</u>, Posture Statement presented to 104<sup>th</sup> Congress, (Washington: U.S. TRANSCOM, 1995), 5.

<sup>23</sup> U.S. Army Field Manual 100-17, 2-2.

<sup>24</sup> Military Traffic Management Command, <u>MTMC Master Plan 1996-2015</u>, (Falls Church, VA: Military Traffic Management Command, undated), 3.

<sup>25</sup> Begert, Bill, Major General, <u>USTRANSCOM Operations Briefing</u>, (Scott AFB, IL: U. S. Transportation Command, undated)

<sup>26</sup> USTRANSCOM Fact File, 5.

<sup>27</sup> Military Sealift Command, <u>MSC Master Plan</u>, (Washington: Military Sealift Command), August 1995, 9.

- <sup>28</sup> Department of Defense, <u>Fact File Military Sealift Command</u>, (Washington: Department of Defense), http://www.dtic.dla.mil/defenselink/factfile/chapter1/navy/sealift.html, 1.

  <sup>29</sup> USTRANSCOM A Vision For The Future, 7.
- <sup>30</sup> "Deploying America's Army", <u>Soldiers Magazine</u>, (August 1994, Volume 49, No. 8), http://www.redstone.army.mil/soldiers/august94/p24.html, 1.
  - <sup>31</sup> MSC Master Plan, Figure 2-3, 25.
  - <sup>32</sup> USTRANSCOM A Vision For The Future, 7.
  - <sup>33</sup> U.S. Army Field Manual 100-17, 2-3.
- <sup>34</sup> Air Mobility Command, <u>Air Mobility Master Plan 1996</u>, (Scott AFB, IL: Air Mobility Command), October 1995, 1-9.
  - <sup>35</sup> Air Force Magazine, USAF Almanac 1995, Vol. 78, No.5, May 1995, 86.
- <sup>36</sup> 100% of MTMC's Transportation Terminal Brigades, Deployment Support Brigades, Port Security Companies, and Railway Operating Battalion personnel are reserve, as is 85% of MSC's waterfront operating sites.
- <sup>37</sup> MTM/D is a simplistic calculations used to assess airlift capability and requires assumptions on aircraft utilization rates, average payloads, and speed of travel.
  - <sup>38</sup> Rutherford, 9.
  - <sup>39</sup> USTRANSCOM A Vision For The Future, 12.
- <sup>40</sup> Department of Defense, <u>Congressionally Mandated Mobility Study</u> (Vol. 1 and Vol. 2), Washington: U.S. Department of Defense, 30 April 1981, 1.
  - <sup>41</sup> Ibid., 34.
- <sup>42</sup> Gebman, Jean R., Lois J. Batchelder, Katherine M. Poehlmann, <u>Finding the Right Mix</u> of Military and Civil Airlift, Issues and Implications (Santa Monica, Ca: RAND Project Air Force Study, Vol. 2, 1994), 32-33.
- <sup>43</sup> Joint Chiefs of Staff, <u>Mobility Requirements Study</u> Vol.1 (Washington: U.S. Department of Defense, 23 January 1992), ES-2.
  - 44 Ibid., ES5-6.
- <sup>45</sup> Joint Chiefs of Staff, <u>Mobility Requirements Study Bottom-Up Review Update</u>, (Washington: U.S. Department of Defense, 28 March 1995), ES-1.
  - <sup>46</sup> Mobility Requirements Study Bottom-Up Review Update, I-2.
  - <sup>47</sup> Rutherford, 6.
  - <sup>48</sup> Mobility Requirements Study Bottom-Up Review Update, ES-6.
  - <sup>49</sup> Rutherford, 12.
  - <sup>50</sup> Mobility Requirements Study, ES-6.
- <sup>51</sup> U.S. Department of the Army, "The Army Strategic Mobility Program, An Information Briefing", (Washington: U.S. Department of the Army, October 1994), "Force Projection Enablers", unnumbered slide.
  - 52 Ibid
  - <sup>53</sup> Rutherford, 18.
- <sup>54</sup> U.S. Transportation Command, <u>Significant Conversational Issues</u>, (Scott AFB IL: HQ USTRANSCOM, 1 December 1995), 20-24.
  - 55 Rutherford, 13.
  - <sup>56</sup> MSC Master Plan, 54-55.
  - <sup>57</sup> Ibid., 56.

<sup>59</sup> Rutherford, 9.

<sup>60</sup> Tirpak, John A., "Airlift Moves Up and Out", Air Force Magazine, February 1996, 26.

<sup>61</sup> Ibid., 30.

<sup>62</sup> Rutherford, 11.

<sup>63</sup> Air Mobility Master Plan-1996, 1-27.

- <sup>64</sup> Miller, Mitchell M., "Global Command and Control System", <u>Mobility News Bulletin</u>, (Volume 3, April 1995), 14-15.
- <sup>65</sup> Jones, Winston M., "What Is Global Transportation Network; And What Does It Do For Mobility", Mobility News Bulletin, Volume 4, July 1995, 13.

<sup>66</sup> Mobility Requirements Study Bottom-Up Review Update, I-1.

- <sup>67</sup> McDonald, Dann, "Strategic Mobility Into The 21st Century", Mobility News Bulletin, (Volume 4, July 1995), 17.
- <sup>68</sup> Department of Defense, DoD News Briefing <u>FY1997 DoD Budget</u>, (Washington: U.S. Department of Defense, Office of the Asst. Sec. Def. Public Affairs, 4 March 1996), http://www.dtic.mil:80/defenselink/news/Mar96/t030496\_tper0304.html, 3.
- <sup>69</sup> General Accounting Office, Report to Congressional Committees: Bottom-Up Review Analysis of Key DoD Assumptions, (Washington: General Accounting Office, January 31, 1995), http://www-tradoc.army.mil/irac/n95-96.txt, 4-5.
  - <sup>70</sup> Gebman, 78.

71 Rutherford, 6.

Privratsky, Kenneth, L., <u>Review Essay: Strategic Mobility's Stem</u>, http://www-cgsc.army.mil/cgsc/milreve/95julaug/essay/privrat.htm, 1.

<sup>&</sup>lt;sup>58</sup> USTRANSCOM, <u>Significant Conversational Issues</u>, 16.

#### **BIBLIOGRAPHY**

- Air Force Magazine, USAF Almanac 1995, Vol. 78, No.5, May 1995.
- Air Mobility Command, <u>Air Mobility Master Plan 1996</u>, Scott AFB, IL: Air Mobility Command, October 1995.
- Begert, Bill, Major General, <u>USTRANSCOM Operations Briefing</u>, Scott AFB, IL: U. S. Transportation Command, undated.
- Cassidy, Duane H., "One-Stop Mobility Shopping", <u>Defense 87</u>, November December 1987, 52-58.
- Canan, James W., "Can TRANSCOM Deliver?", Air Force Magazine, October 1987, 40-46.
- Department of Defense, <u>Congressionally Mandated Mobility Study</u> (Vol. 1 and Vol. 2), Washington: U.S. Department of Defense, 30 April 1981.
- Department of Defense, DoD News Briefing <u>FY1997 DoD Budget</u>, (Washington: U.S. Department of Defense, Office of the Asst. Sec. Def. Public Affairs, 4 March 1996), http://www.dtic.mil:80/defenselink/news/Mar96/t030496\_tper0304.html.
- Department of Defense, <u>Fact File Military Sealift Command</u>, Washington: U.S. Department of Defense, http://www.dtic.dla.mil/defenselink/factfile/chapter1/navy/sealift.html.
- Department Of Defense, <u>United States Transportation Command</u>, DoD Directive 5158.4, Washington: U.S. Department of Defense, 8 January 1993.
- "Deploying America's Army", Soldiers Magazine, August 1994, Volume 49, No. 8, http://www.redstone.army.mil/soldiers/august94/p24.html.
- Fogleman, Ronald R. General, <u>An Oral History</u>, Scott AFB, IL: USTRANSCOM Research Center, March 1995.
- Gebman, Jean R., Lois J. Batchelder, Katherine M. Poehlmann, <u>Finding the Right Mix of Military and Civil Airlift, Issues and Implications</u>, Santa Monica, Ca: RAND Project Air Force Study, 1994.
- General Accounting Office, <u>Report to Congressional Committees: Bottom-Up Review Analysis of Key DoD Assumptions</u>, Washington: General Accounting Office, January 31, 1995, http://www-tradoc.army.mil/irac/n95-96.txt.
- Institute For National Strategic Studies, <u>Strategic Assessment 1995</u>, Washington: U.S. Government Printing Office, 1995.

- Johnson, Hansford T., General, <u>United States Transportation Command and Air Mobility</u>
  <u>Command: An Oral History</u>, Scott AFB, IL: Office of History, December 1992.
- Joint Chiefs of Staff, <u>DoD Dictionary of Military Publications and Associated Terms</u>, Joint Publication 1-02, Washington: U.S. Department of Defense, 23 March 1994.
- Joint Chiefs of Staff, Mobility Requirements Study (Vol. 1 and Vol. 2), Washington: U.S. Department of Defense, 23 January 1992 (Vol. 1) and 5 June 1993 (Vol. 2).
- Joint Chiefs of Staff, Mobility Requirements Study Bottom-Up Review Update, Washington: U.S. Department of Defense, 28 March 1995.
- Joint Chiefs of Staff, National Military Strategy of the United States Of America, Washington: U.S. Government Printing Office, 1995.
- Jones, Winston M., "What Is Global Transportation Network; And What Does It Do For Mobility", Mobility News Bulletin, Volume 4, July 1995, 13-15.
- McDonald, Dann, "Strategic Mobility Into The 21st Century", Mobility News Bulletin, (Volume 4, July 1995), 16-29.
- Military Sealift Command, MSC Master Plan, Washington: Military Sealift Command, August 1995.
- Military Traffic Management Command, <u>MTMC Master Plan 1996-2015</u>, Falls Church, VA: Military Traffic Management Command, undated.
- Miller, Mitchell M., "Global Command and Control System", Mobility News Bulletin, Volume 3, April 1995, 14-15.
- Privratsky, Kenneth, L., <u>Review Essay: Strategic Mobility's Stem</u>, http://www-cgsc.army.mil/cgsc/milreve/95julaug/essay/privrat.htm.
- Russell, James A. "Deployment: Will TRANSCOM Make A Difference", Military Logistics Forum, June 1987, 38-45.
- Rutherford, Robert L. General, <u>United States Transportation Command</u>, Posture Statement presented to 104<sup>th</sup> Congress, Scott AFB, IL: USTRANSCOM, 1995.
- Tirpak, John A., "Airlift Moves Up and Out", Air Force Magazine, February 1996, 26-32.
- "Transportation Unified The Arrival of TRANSCOM", Airlift, Fall 1987, 1-9.

- U.S. Department of the Army, <u>Mobilization</u>, <u>Deployment</u>, <u>Redeployment</u>, <u>Demobilization</u>, Army Field Manual 100-17. Washington: U.S. Department of the Army, 28 October 1992.
- U.S.Department of the Army, "The Army Strategic Mobility Program, An Information Briefing", Washington: U.S. Department of the Army, October 1994.
- U.S. Transportation Command, <u>Significant Conversational Issues</u>, Scott AFB IL: Hq USTRANSCOM, 1 December 1995.
- U.S. Transportation Command, <u>USTRANSCOM Fact File</u>, Scott Air Force Base, IL: Public Affairs Office, Updated January 1995, http://ustcweb.safb.af..mil/PA/FACTFILE.HTM.
- U.S.Transportation Command, <u>USTRANSCOM A Vision For The Future</u>, USTRANSCOM Pamphlet 35-1, Scott AFB, IL: Public Affairs Office, March 1995.
- White House, <u>A National Security Strategy of Engagement and Enlargement</u>, Washington: The White House, February 1995.